# NEUROSCIENCE AND BIOBEHAVIORAL REVIEWS

VOLUME 18, 1994
KEYWORD AND AUTHOR INDEX

Pergamon

# *NEUROSCIENCE AND BIOBEHAVIORAL REVIEWS*

**Editors-in-Chief**



STEVEN J. COOPER
Department of Psychology
University of Durham
Science Laboratories
South Road
Durham DH1 3LE, U.K.
E-mail: s.j.cooper@durham.ac.uk

IAN Q. WHISHAW
Department of Psychology
University of Lethbridge
4401 University Drive
Lethbridge
Alberta Canada T1K 3M4
E-mail: whishaw@hg.uleth.ca



**Editorial Advisory Board**

JOCELYNE BACHEVALIER, University of Texas Health Science Center, Houston, TX
D. CAROLINE BLANCHARD, University of Hawaii, HI
MICHAEL CORNER, Netherlands Institute for Brain Research, Meibergdreef, The Netherlands
WILLIAM C. DEMENT, Stanford University, Palo Alto, CA
COLIN T. DOURISH, Wyeth Research Ltd, Maidenhead, UK
BARRY J. EVERITT, University of Cambridge, UK
CHARLES A. HEYWOOD, University of Durham, UK
MICHAEL H. JOSEPH, Institute of Psychiatry, UK
ABBA J. KASTIN, Veterans Administration Medical Center, New Orleans, LA
RICHARD KATZ, CIBA-GEIGY Corporation, Summit, NJ
CHARLES L. KUTSCHER, Syracuse University, Syracuse, NY
PETER J. MORGANE, University of New England, Biddleford, ME
PETER REDGRAVE, University of Sheffield, UK
T. W. ROBBINS, University of Cambridge, UK
TERRY E. ROBINSON, University of Michigan, Ann Arbor, MI
BENJAMIN RUSAK, Dalhousie University, Nova Scotia, Canada
PAUL SANBERG, University of South Florida, Tampa, FL
SUSAN SCHIFFMAN, Duke University, Durham, NC
RICHARD F. THOMPSON, University of Southern California, Los Angeles, CA
NORMAN WHITE, McGill University, Montreal, Canada
JOHN YEOMANS, University of Toronto, Toronto, Canada

*Founding Editor:* Matthew J. Wayner



*Neuroscience and Biobehavioral Reviews* is an official journal of the International Behavioral Neuroscience Society. For information about the Society, please contact: Marianne Van Wagner, IBNS Central Office, Division of Life Sciences, The University of Texas at San Antonio, 6900 North Loop 1604 West, San Antonio, TX 78249-0662 USA. Fax: (210) 691-4510 or E-mail: editoff@lonestar.utsa.edu. Members of the International Behavioral Neuroscience Society may order personal subscriptions at a concessional rate; details of this rate are available upon request.

*Publishing, Subscription, and Advertising Offices:* Elsevier Science Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, USA, E-mail: ESUK.USA@ELSEVIER.COM; and Elsevier Science Ltd, The Boulevard, Langford Lane, Kidlington, Oxford, OX5 1GB, UK.

*Published Quarterly*

*Annual Institutional Subscription Rates* 1995: North, Central, and South America, US $552.00, Rest of World £370.00. Associated Personal Subscription Rates are available on request for those whose institutions are library subscribers. Sterling prices exclude VAT. Non-registered VAT customers in the European Community will be charged the appropriate VAT in addition to the price listed. Prices include postage and insurance and are subject to change without notice.

*Production Editor:* John Fotia, E-Mail: J.FOTIA@ELSEVIER.COM

Pergamon

Neuroscience and Biobehavioral Reviews, Vol. 18, No. 4, pp. III–V, 1994
Copyright © 1994 Elsevier Science Ltd
Printed in the USA. All rights reserved
0149-7634/94 $6.00 + .00

VOLUME 18 1994

# KEYWORD INDEX

Acetylcholine, 1
Adenylate cyclase, 251
Ageing, 469
Aggression, 97
Agonistic behavior, 325
Alcohol, 97
Alcohol consumption, 21
Allometry, 435
Allostasis, 385
Alzheimer's disease, 21
Amnesia, 55
Amphetamine, 111, 207, 497
Amygdala, 373, 385
Analgesia, 403
Angiotensin II, 21
Angiotensin III, 21
Angiotensin IV, 21
Angiotensin converting enzyme inhibitors, 21
Angiotensin receptor subtypes, 21
Anterior hypothalamus, 1
Anti-vasopressin antibody, 497
Anti-vasopressin $V_1$ receptor antagonist, 497
Antidepressant, 73, 85
Antioxidants, 457
Antipsychotic, 97
Anxiety, 73, 355
Anxiolytic, 73
Apomorphine, 497
Auditory attention, 215
Aversion, 339
Avian pineal, 537

Background metabolism, 435
Bacterial pyrogen, 1
Behavior, 85, 121, 497
Behavioral development, 347
Benzodiazepine receptor, 97
Benzodiazepine receptor subtypes, 355
Biological oscillators, 547
Blind, 579
Blood flow, 21
Blood–brain barrier, 519
Body temperature, 1
Body weight, 197
Bombesin, 313
Brain capillaries, 397
Brain danger, 469
Brain hemisphere, 487
Brain receptor distribution, 21
Brain stem, 403
Brain-derived neurotrophic factor, 143
Buspirone, 73

CA1, 397
Calcium, 555
Carbohydrates, 197
Catalase, 457
Catecholamines, 457
Caudate nucleus, 373
CCK, 207
Cerebellum, 161
Cerebral blood flow, 397
Cerebral cortex, 111
c-*Fos*, 497, 531
Chaos, 397
Cholecystokinin, 313
Cholinesterase, 469
Chromophore, 541
Chronic infusions, 373
Circadian, 541
Circadian rhythm, 531, 537, 555, 563, 571, 591, 601, 171, 421
Circadian system, 305
c-*Jun*, 497
Closed-circuit, 435
Cocaine, 121, 207, 269
Cognition, 21
Cognitive evoked potentials, 55
Cognitive impairment, 487
Conditioned reflexes type II, 449
Conflict, 73
Correlative analysis, 497
Cortical spreading depression, 497
CPG, 585
Cycloheximide, 497

Deconvolution, 605
Deep brain photoreceptors, 541
Defeat, 97
Defense, 97
Dependence, 355
Depression, 21, 73
Development, 497
Diencephalon, 1
Dietary fats, 197
Differential stimulation, 497
Direct oxime effects, 469
Discrimination learning, 161
Discriminative stimulus effects, 355
Disturbed/turbulent flow, 397
Dopamine, 111, 207
Dopamine receptor antagonist, 97
Dorsal noradrenergic bundle, 497
DPAG, 339
Drug abuse, 121
Drug discrimination, 73, 85
Drug effects, 223

Efference copy, 585
Electrical stimulation, 497, 531
Electroconvulsive shock, 497
Endogeneous opiate system, 519
Endogeneous opioids, 269
Energy expenditure, 435
Energy nutrients, 397
Energy regulation, 197
Entrainment, 171
Environmental context, 347
Epilepsy, 281
Escape behavior, 373
Estrogen, 251
Ethological analysis, 325
Evolution, 571
Excitatory amino acids, 111
Extraretinal photoreceptors, 541

Feeding, 197, 207, 313, 421
Fetus, 347
Fever, 1
Food restriction, 171
Food selection, 579
Foraging, 171
Forced swim test, 85
Free radicals, 457
Fura-2, 555

GABA, 55
GABA receptors, 291
Galanin, 313
Gammahydroxybutyrate, 291
Gene expression, 305
Glucose homeostasis, 579
Glutathione, 457
Glutathione peroxidase, 457
Glutamate, 111, 457
Goldfish, 563
Gonadotropin subunit transcription, 597
Growth factor, 21
Growth hormone-releasing hormone (GHRH), 421

Hamster, 531
Handling, 497
Hemodynamic, 397
Hemorheologic, 397
Hippocampal adrenocorticoid receptors, 497
Hippocampal functions, 497
Hippocampal spreading depression, 497
Hippocampus, 397
Hormone, 269, 605
5-HT, 73, 97
5-HT receptor agonist, 97
5-$HT_{1A}$, 73
5-$HT_{1A}$ agonists, 325
5-HT receptor antagonist, 97
5-$HT_{1A}$ antagonists, 325
5-$HT_{1A}$ receptors, 85
Hyperthermia, 1
Hypothalamus, 411
Hypothyroidism, 497

Immediate early genes, 497
$^{123}$I-Iomazenil, 281
Indirect calorimetry, 435
Individual differences, 207
Inferior colliculus, 339
Information processing, 487

Intergeniculate leaflet, 531
Interictal spikes, 411
Intra-and ingrapyramidal mossy fibers, 497
Intruder, 97
Ischemia, 21

Juvenile rats, 269

Kindling, 411

Lamprey, 585
Lateral geniculate nucleus, 531
Lateral hypothalamus, 373
Learning, 171, 585
Learning and memory, 497
Litter effects, 347
Litter size, 497
Locomotor activity, 207
Locus coeruleus, 497
Long-term habituation, 497
Long-term potentiation, 21, 55
Lordosis, 251
Low-calorie food substitutes, 197

Maturation, 497
Medial preoptic area (MPOA), 269
Medial septal nuclei, 497
Melatonin, 537, 563
Melatonin receptors, 563
Memory, 21, 355
*N*-methyl-D-aspartate, 591
Microcerebrovasculature, 397
Microdialysis, 537
Midbrain central gray, 251
Midbrain tectum, 339
MIF-1, 519
Modeling, 605
Morphine, 269, 373
Mother–infant dyad, 347
Motor activity, 97
Motor control, 585
Motor systems, 21
Muscle stimulants, 469

Naloxone, 269, 373, 497
Neonate, 347
Nerve growth factor, 143
Neural plasticity, 269
Neuroimaging, 281
Neuroleptics, 111, 457
Neuronal cell, 571
Neuronal circuits, 547
Neuropeptide, 251, 421
Neuropeptide Y, 313
Neurotransmitter, 251, 291
Neurotrophin-3, 143
Neurotrophin-4, 143
Neurotrophin-5, 143
Nitric oxide, 457
NMDA receptor, 531
Non-NMDA receptor, 531
Norepinephrine, 1, 85
Nucleus accumbens, 207, 373
Nutrient regulation, 197
Nutrition, 197, 579

8-OH-DPAT, 73
Olfaction, 269
Olivo-cochlear efferent system, 215
Open-circuit, 435
Opiates, 97, 403
Opioid, 97, 497
Opisthobranch molluk, 555
Opsin, 541
Organophosphates, 469
Organotypic slice culture, 601
Oscillator, 555
Osmotic minipumps, 373
Otoacoustic emissions, 215
Ovarian hormones, 269
Oximes, 469

Pain, 403
Paragigantocellularis, 403
Parity, 269
Periacqueductal gray, 403
Period repeat sequence, 571
Periventriuclar gray region, 373
PET, 281
Petit mal status, 411
$PGE_1$, 1
$PGE_2$, 1
Pharmacological antagonist, 1
Pharmacotherapy, 121
Phase shift, 531
Phosphoinositides, 251
Phospholipase C, 251
Photic entrainment, 531
Photopigment, 541
Photoreceptor, 555
Physical dependence, 373
Physiological regulation, 347
Pigeon, 73
Pineal gland, 563
Pituitary, 605
Plasticity, 449
Postictal inhibition, 411
Prenatal stress, 269
Preoptic area, 411
Primate, 1
Prolactin, 269
Propylthiouracil, 497
Prostaglandins, 1
Protein kinase C, 251
Protein synthesis inhibitor, 497
Psychopathology, 385
Psychosis, 111
Psychostimulant, 207
Pulsatile, 605
Pulsatile GnRH administration, 597
Punishment, 73

Quisqualic acid, 111

Raphe magnus, 403
Rat, 579
Rat brain, 571
Reactive astrocytosis, 397
Reciprocal inhibition, 547
Recurrent excitation, 55
Regional cerebral blood flow, 281
Renin-angiotensin system, 21
Respiratory quotient, 435
Resting metabolism, 435
Restraint, 223
Retina, 563
Retinohypothalamic tract, 591
Review, 223, 497
Reward, 207
Rhythmic movements, 547
Roller-tube technique, 601

Schedules of reinforcement, 97
Schizophrenia, 111, 457, 487
Secretion, 605
Sedation, 355
Seizures, 411
Self-stimulation, 411
Sensory systems, 21
Serotonin, 1, 73, 85
Setraline, 85
Shock avoidance learning, 161
Sleep, 497
Social behavior, 325
Soman, 469
Somatostatin, 421
Spatial learning, 161
SPECT, 281
Spontaneous activity, 435
Status epilepticus, 411
Stimulants, 111
Stress, 21, 223
Substrate oxidation, 435
Sugars, 197
Superior colliculus, 339
Superoxide dismutase, 457
Suprachiasmatic nucleus, 305, 531, 571, 591, 601
Switching, 449

Tardive dyskinesia, 457
Taste aversion, 85
Teeth chattering, 373
Thalamus, 373
Therapeutic agent, 291
Thermic effect of food, 435
Thermoregulatory set-point, 1
$^3$H-thymidine incorporation, 497
Tolerance, 97, 355, 469
Top-down control, 215
Toxicity, 121
Transcriptional regulation, 597
Trk protooncogene, 143
Try-K-MIF-1, 519
Try-MIF-1, 519
Try-W-MIF-1, 519
Tyrosine kinase, 143

Vasoactive intestinal polypeptide, 591
Vasopressin, 497
Vasopressin release, 601
Ventral tegmental area, 373
Ventromedial hypothalamus, 251
Vertebrates, 541
Visual attention, 215

Water balance, 579
Wet-dog shakes, 373
Wheel running, 171
Withdrawal behavior, 373

**VOLUME 18 1994**

## AUTHOR INDEX


Abe, H., 531
Aida, K., 563

Bakke, H.-K., 223
Banks, W. A., 143
Barrett, J. E., 73
Beckman, B. S., 143
Bell, R., 325
Bellisle, F., 197, 613
Benavides, J., 355
Block, G. D., 529, 555
Bozarth, M. A., 373
Brandão, M. L., 339
Busker, R. W., 469

Cadet, J. L., 457
Cardoso, S. H., 339
Cash, C. D., 291
Cerbone, A., 497
Cohen, C., 355
Coimbra, N. C., 339
Collet, L., 215

de Groot, D. M. G., 469
Degrip, W. J., 541
de la Torre, J. C., 397

Ebihara, S., 537
Even, P. C., 435

Fallest, P. C., 597
Feifel, D., 421
Foster, R. G., 541
Freed, W. J., 111
Friesen, W. O., 547

Gamble, E. H., 73
Garcia-Fernandez, J. M., 541
Geusz, M. E., 555
Glavin, G. B., 223
Gleeson, S., 73
Gold, P. W., 385
Gotto, M., 537
Grace, M. S., 541

Halgren, E., 55
Hamada, T., 591
Haney, M., 97
Harding, J. W., 21
Hasegawa, M., 537
Herberg, L. J., 411
Hobson, H., 325

Iigo, M., 563
Ikonomov, O. C., 305
Inouye, S.-I. T, 529, 601
Ishida, N., 571

Jibiki, I., 281
Johnson, M. L., 605
Joly, D., 355

Kahler, L. A., 457
Kastin, A. J., 143
Kezuka, H., 563
Kinsley, C. H., 269
Kow, L.-M., 251
Kreiss, D. S., 85

Lalonde, R., 161
Lee, M. C., 313
Lucki, I., 71, 85

Maness, L. M., 143
Matsui, M., 571
McEwen, B. S., 385
Melchers, B. P. C., 469
Melo, L. L., 339
Meric, C., 215
Miczek, K. A., 97
Mistlberger, R. E., 171
Mitsui, Y., 571
Mobbs, C. V., 251
Mokhtarian, A., 435
Morel, E., 355
Motta, V., 339
Murison, R., 223
Myers, R. D., 1

Nagai, K., 579
Nagai, N., 579
Nakagawa, H., 579
Nenov, V. I., 55
Niijima, A., 579
Nishii, J., 585
Nishimatsu, S.-I., 571
Nohno, T., 571
Noji, S., 571

Okamura, H., 601
Olson, G. A., 519
Olson, R. D., 519
Ono, M., 591
Oshima, I., 537

Pappas, T. N., 313
Paré, W. P., 223
Pele, A., 435
Perez, C., 197, 613
Perrault, G., 355
Pfaff, D. W., 251
Provencio, I., 541

Read, W., 55
Reed, G. W., 519
Robinson, S. R., 347
Rose, I. C., 411
Rosenfeld, J. P., 403
Rotenberg, V. S., 487
Rusak, B., 531
Ruwe, W. D., 1

Sadile, A. G., 497
Sanberg, P. R., 71
Sandbak, T., 223
Sanger, D. J., 355
Schiffman, S. S., 313
Schulkin, J., 385
Shibata, N., 571
Shibata, S., 591
Shupnik, M. A., 597
Simpson, C. W., 1
Singh, A., 85
Smotherman, W. P., 347
Stoynev, A. G., 305
Sugahara, K., 579
Suzuki, R., 585
Suzuki, T., 563

Tabata, M., 563
Tidey, J., 97
Tominaga, K., 591, 601

Uno, Y., 585

Vaccarino, F. J., 207, 421
van Helden, H. P. M., 469
Veldhuis, J. D., 605

Watanabe, A., 591
Watanabe, S., 591
Weber, J. T., 143
Weerts, E., 97
Weller, A., 455
Weller, L., 455
Witkin, J. M., 121
Wolthuis, O. L., 469
Wright, J. W., 21
Wyrwicka, W., 449

Yamaguchi, N., 281

Zadina, J. E., 143
Zhang, L., 73
Zivkovic, B., 355